Hydel power generation

*194. DR. T. SUBBARAMI REDDY:
SHRI RAJEEV SHUKLA:

Will the Minister of POWER be pleased to state:

(a) whether Government is giving top priority to exploit hydel potential in India, as hydel power is cheaper than the nuclear energy;

(b) whether Government proposes to implement a 40 MW hydro electric project on river Beas;

(c) whether Government has decided to give priority to power sector during the Eleventh Five Year Plan;

(d) if so, what concrete measures and steps Government is considering to take to improve the hydel power projects; and

(e) by when all the power projects, that are being presently set up, would be completed and what would be the total power generation (in MWs) after completion of these projects?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) Yes, Sir. The Government is giving priority to exploit hydro power development in India.

(b) Dhaula Sidh Hydro Electric Project (40 MW) in Himachal Pradesh on river Beas is under development by M/s Satluj Jal Vidyut Nigam Ltd. for which agreement with the Govt. of Himachal Pradesh was signed on 27.10.2008.

(c) Yes, Sir. The Planning Commission has approved a capacity addition of 78,700 MW in the 11th Plan as against the total capacity addition of 21,180 MW in the 10th Plan. The proposed capacity addition of 78,700 MW in the 11th Plan includes 36,874 MW in Central Sector, 26,783 MW in State Sector and 15,043 MW in Private Sector.

(d) In order to give a fillip to hydro power development, the Government has approved the New Hydro Policy, 2008. This policy seeks to create a level playing field for private sector projects *vis-a-vis* public sector projects. It also offers some additional benefits to project affected families over and above the National Rehabilitation and Resettlement Policy (NRRP), 2007. The Government has taken several further steps to achieve 11th Plan hydro capacity programme, *viz:-*

- Only those projects have been included in the capacity addition programme of 11th Plan which had all the statutory clearances required for execution of a project. Through rigorous monitoring, it had been ensured that orders for main works were placed in a timely manner.

- The monitoring mechanism has been strengthened to achieve targets by designating a nodal officer for each project, both at the conception stage as well as during execution. The nodal officers keep track of and facilitate resolution of problems which may delay the project by escalating the issue to appropriate levels for immediate resolution. In addition, regular review meetings are being organized in the Ministry of Power.

- The Government has also constituted a Task Force under the Chairmanship of Chairperson, CEA for the development of Model Contract Documents for accelerated development of hydel power projects. The responsibility of the Task Force is to recommend a set of Model Contract

Documents which can be adopted uniformly by hydro project developers for early completion of projects. This would minimize contractual problems so as to avoid delays during project execution.

— The Government has constituted a sub-Committee of the Standing Group of Power Ministers called the *"Task Force on Hydro Power Development"*, to look into all issues relating to the development of hydro power, including issues of rehabilitation and resettlement of project affected persons, under the Chairmanship of Hon'ble Minister of Power. It also comprises various other Ministers from Central / State Governments and also representatives from CPSUs /CEA/ CWC etc.

— A National Power Projects Monitoring Panel has also been formed comprising various experts from different fields of engineering. The responsibility of this panel is to visit various on-going projects and to point out the shortcomings, if any, for early completion of the project.

(e) The capacity addition during the 11th Plan is likely to increase significantly *i.e.* 78,700 MW, against the capacity addition of merely 21,180 MW, during the 10th Plan out of which the share of hydro power was 7,886 MW. A statement indicating the summary of capacity addition proposed during 11th Plan is enclosed at Statement-I (*See* below). A Statement indicating the hydro power projects proposed for likely benefits during 11th Plan is enclosed as Statement-II.

Statement-I

Summary of capacity addition proposed during 11th plan

		Thermal breakup						
	Hydro	Total thermal	Coal	Lignite	Gas/ LNG	Liq. Fuel	Nuclear	Total
	1	2	3	4	5	6	7	8
A. Projects commissioned								
Central sector	1030	2240	1500	0	740	0	220	3490
State sector	2132	4700	4380	0	320	0	0	6832
Private sector	0	1000	1000	0	0	0	0	1000
All-India	3162	7940	6880	0	1060	0	220	11322
B. Projects under construction#								
Central sector	7624	19256	17780	750	726	0	3160	30040
State sector	1230	16201	12754	450	2997	0	0	17431
Private sector	3491	10552	7435	1080	2037	0	0	14043
All-India	12345	46009	37969	2280	5760	0	3160	61514
Total (A+B)								
Central sector	8654	21496	19280	750	1466	0	3380	33530
State sector	3362	20901	17134	450	3316	0	0	24263

	1	2	3	4	5	6	7	8
Private sector	3491	11552	8435	1080	2037	0	0	15043
All-India	15507	53949	44849	2280	6819	0	3380	72836
C. Additional projects under construction								
Central sector	0	0	0	0	0	0	0	0
State sector	0	1100	1100	0	0	0	0	1100
Private sector	0	5854	5380	0	474	0	0	5854
All-India	0	6954	6480	0	474	0	0	6954
Total capacity feasible at present (A+B+C)								
Cental sector	8654	21496	19280	750	1466	0	3380	33530
State sector	3362	22001	18234	450	3316	0	0	25363
Private sector	3491	17406	13815	1080	2511	0	0	20897
All-India	15507	60903	51329	2280	7293	0	3380	79790
D. Additional projects being attempted under best efforts - under construction								
Central sector	0	0	0	0	0	0	0	0
State sector	0	0	0	0	0	0	0	0
Private sector	0	1800	1800	0	0	0	0	1800
All-India	0	1800	1800	0	0	0	0	1800
E. Projects not likely to be completed during 11th plan								
(Out of Planning Commission Targetted Capacity of 78,700 MW)								
Central sector	0	3320	3320	0	0	0	0	3320
State sector	120	2600	2600	0	0	0	0	2720
Private sector	0	0	0	0	0	0	0	0
All-India	120	5920	5920	0	0	0	0	6040
Target as per Planning Commission - 78700 MW								
Central sector	8654	24840	22600	750	1490	0	3380	36874
State sector	3482	23301	19535	450	3316	0	0	26783
Private sector	3491	11552	8435	1080	2037	0	0	15043
All-India	15627	59693	50570	2280	6843	0	3380	78700

Though Sipat TPS St. II Unit-5 of 500 MW, Valuthur CCGT (ST) of 32.4 MW, Kutch Lignite TPS Unit-4 of 75 MW capacity have been synchronized but the same have not been added to the achievements in view of revised definition of commissioning of Thermal Power Projects

Statement-II

List of Projects proposed for likely benefits during 11th Plan – Hydro

Sl. No.	Plant Name	Region	State	Agency	Sector	Category	Unit size group	No. of units in 11th Plan	Ultimate capacity (MW)	Type	Benefits 11th Plan (2007-12)	Likely year of benefit	2007-08	2008-09	2009-10	2010-11	2011-12	DPR Status	Concurrence of CEA/State Govt.	CCEA/ Financial Closure	LOA Date/ Civil Contract	E&M Equipment Order	Agency Remarks
A & B Projects commissioned & Under construction																							
1	Parbati-II	North	HP	NHPC	C	UC	200 and above	4	800	ROR	800	2011-12					800	Ready	Oct., 99	Sept. 02	Sept, 02	Dec. 02	BHEL
2	Chamera-III	North	HP	NHPC	C	UC	Less than 100	3	231	ROR	231	2010-11				231		Ready	Oct., 03	Aug, 05	Sep, 05	Jan, 07	ALSTOM
3	Parbati-III	North	HP	NHPC	C	UC	199-100	4	520	ROR	520	2010-11				520		Ready	Nov., 03	Oct, 05	Dec, 05	Dec, 06	BHEL
4	Sewa-II	North	J&K	NHPC	C	UC	Less than 100	3	120	ROR	120	2009-10			120			Ready	Oct., 02	Dec, 05	Sept, 03	June, 04	BHEL
5	URI-II	North	J&K	NHPC	C	UC	Less than 100	4	240	ROR	240	2010-11				240		Ready	Feb., 04	Aug, 05	Sept, 05	Dec, 06	ALSTOM
6	Nimoo Bazgo	North	J&K	NHPC	C	UC	Less than 100	3	45	ROR	45	2011-12					45				Sep, 06	June, 07	BHEL
7	Chutak	North	J&K	NHPC	C	UC	Less than 100	4	44	ROR	44	2011-12					44				Sep, 06	Aug, 07	BHEL
8	Omkaresh-war	West	M.P.	NHDC	C	COMND	Less than 100	8	520	ROR		2007-08	520					Ready	Jan, 94	April., 03	June, 03	June, 03	VOITH SIEMENS
9	Teesta V U, 1, 2, 3	East	Sikkim	NHPC	C	COMND	Less than 100	3	510	ROR	510	2007-08	510					Ready	Done	Done	March, 01	Nox., 01	TOSHIBA
10	Teesta Low Dam-III	East	WB	NHPC	C	UC	Less than 100	4	132	ROR	132	2009-10			132			Ready	Done	Oct, 03	Oct, 03	July, 04	VA Tech Bhopal
11	Teesta Low Dam-IV	East	WB	NHPC	C	UC	Less than 100	4	160	ROR	160	2010-11				160		Ready	Dec., 03	Sept, 05	May, 06	May, 07	BHEL
12	Subansiri Lower	N. East	Ar. Pr.	NHPC	C	UC	200 & above	8	2000	STO	2000	2011-12					2000	Ready	JAN., 03	JUNE, 03	DEC, 03	FEB, 05	ALSTOM
13	Koteshwar	North	UKND	THDC	C	UC	Less than 100	4	400	STO	400	2010-11				400		Ready	AUG., 09	Apr,2000	AUG, 02	FEB, 03	BHEL
14	Rampur	North	HP	SJVNL	C	UC	Less than 100	5	412	ROR	412	2011-12					412	Ready	DEC., 05	JAN, 07	FEB, 07	SEP, 08	BHEL

Sl. No.	Plant Name	Region	State	Agency	Sector	Category	Unit size group	No. of units in 11th Plan	Ultimate capacity (MW)	Type	Benefits 11th Plan (2007-12)	Likely year of benefit	2007-08	2008-09	2009-10	2010-11	2011-12	DPR Status	Concurrence of CEA/State Govt.	CCEA/ Financial Closure	LOA Date/ Civil Contract	E&M Equipment Order	Agency Remarks
15	Kameng	N. East	AR.PR.	NEEPCO	C	UC	199-100	4	600	STO	600	2011-12					600	Ready	APR., 91	DEC, 04	DEC, 04	DEC, 04	BHEL
16	Kol Dam	North	H.P.	NTPC	C	UC	200 and above	4	500	STO	800	2009-10			800			Ready	JUNE, 02	OCT, 02	DEC, 03	JULY, 04	BHEL
17	Lohari Nagpala	North	UKND	NTPC	C	UC	199-100	4	600	ROR	600	2011-12					600	Ready	AUG., 04	JULY, 05	NOV, 06	2007-08	VOITH SIEMENS
18	Tapovan Vishnugarh	North	UKND	NTPC	C	UC	199-100	4	520	ROR	520	2011-12					520	Ready	AUG., 04	DEC, 06	NOV, 06	2007-08	BHEL
19	UHL-III	North	H.P.	HPJVVNL	S	UC	Less than 100	3	100	ROR	100	2010-11				100		Ready	SEP., 02	FEB, 03	APR, 03	FEB, 07	BHEL
20	Sawara Kuddu	North	H.P.	PVC	S	UC	Less than 100	3	110	ROR	110	2011-12					110	Ready	DONE	DONE	JUNE, 07	2008-09	
21	Baglihari-I U1, 2, 3	North	J&K	JKPDC	S	COMND	199-100	3	450	ROR	450	2008-09		450				Ready	DONE	DONE	APR, 99	JULY, 99	VOITH SIEMENS
22	Maneri Bhali	North	UKND	UJVNKL	S	COMND	Less than 100	4	304	ROR	304	2007-08	304					Ready	JAN., 81	DONE	JULY, 02	NOV, 02	BHEL
23	Ghatghar PSS U1, 2	West	MAH.	GOMID	S	COMND	199-100	2	250	PSS	250	2008-09		250				Ready	AUG., 92	DONE	MAY, 98	MAR, 00	NISSHO IWAI
24	Jurala Priya U1	South	AP	APGENCO	S	COMND	Less than 100	1	39	STO	39	2007-08	39					Ready	JULY., 02	JULY, 02	APRIL, 04	MAR, 04	CMEC, CHINA
24	Jurala Priya U2	South	AP	APGENCO	S	COMND	Less than 100	1	39	STO	39	2007-08		39				Ready	JULY., 02	JULY, 02	APRIL, 04	MAR, 04	CMEC, CHINA
24	Jurala Priya U 3-6	South	AP	APGENCO	S	UC	Less than 100	4	155	STO	155	2008-10		78	78			Ready	JULY, 02	JULY, 02	APRIL, 04	MAR, 04	CMEC, CHINA
25	Nagarjuna Sagar TR	South	AP	APGENCO	S	UC	Less than 100	2	50	STO	50	2009-10			50			Ready	NOV, 94	DONE	MAY, 05	JUNE, 06	BHEL
26	Lower Jurala	South	AP	APGENCO	S	UC	Less than 100	3	240	STO	40	2011-12					120	Ready	JUNE, 07	DEC, 07	JAN, 08	JUNE, 08	ALSTOM
27	Pulichintala	South	AP	APID	S	UC	Less than 100	4	120	ROR	120	2011-12					120			APR, 07	JULY, 07	MAY, 07	BHEL
28	Varahi Ext	South	KAR	KPCL	S	UC	199-100	2	230	ROR	230	2008-09		230				Ready	DONE	DONE	NOV, 05	JULY, 06	VA TECH BHOPAL

Sl. No.	Plant Name	Region	State	Agency	Sector	Category	Unit size group	No. of units in 11th Plan	Ultimate capacity (MW)	Type	Benefits 11th Plan (2007-12)	Likely year of benefit	2007-08	2008-09	2009-10	2010-11	2011-12	DPR Status	Concurrence of CEA/State Govt.	CCEA/ Financial Closure	LOA Date/ Civil Contract	E&M Equipment Order	Agency Remarks
29	Kutiyadi Ext.	South	KERALA	KSEB	S	UC	Less than 100	2	100	STO	100	2008-10		50	50			Ready	DONE	DONE	NOV, 03	NOV, 03	BHEL
30	Pallivasal	South	KERALA	KSEB	S	UC	Less than 100	2	60	ROR	60	2010-11				60		Ready	DONE	DONE	JAN, 07	JAN, 07	DONG FANG, CHINA
31	Bhawani Barrage II & III	South	TN	TNEB	S	UC	Less than 100	4	60	ROR	60	2009-11			30	30		Ready	JUNE, 99	MAR, 02	FEB, 06	NOV, 06	LITOSROJ, SLOVANIA & KONGAR, CROATIA
32	Balimela St-II, U7, 8	East	ORISSA	OHPC	S	COMND	Less than 100	2	150	ROR	150	2007-08	150					Ready	JAN, 01	DONE	OCT, 03	OCT, 03	POWER MACHINES, RUSSIA
33	Purlia PSS	East	WB	WBSEB	S	COMND	200 and above	1	900	PSS	900	2007-08	900					Ready	MAY, 93	DONE	JUNE, 01	JULY, 2000	TOSHIBA
34	Myntdu St-I	N. East	MEGH	MCSEB	S	UC	Less than 100	2	84	STO	84	2009-10			84			Ready	SEP, 99	JUNE, 03	MAR, 04	DEC, 05	VA TECH BHOPAL
35	New UMTRU	N East	MEGH	MCSEB	S	UC	Less than 100	2	40	ROR	40	2011-12					40	Ready	DONE	DONE	FEB, 08	2008-09	
36	Budhil	North	H.P.	LANCO	P	UC	Less than 100	2	70	ROR	70	2009-10			70			Ready	DONE	DONE	Awarded	JULY, 06	DONGFANG, CHINA
37	Allain Duhangan	North	H.P.	ADHPL	P	UC	Less than 100	2	192	ROR	192	2009-10			192			Ready	AUG, 02	AUG, 02	NOV. 05	NOV, 05	BHEL
38	Malana II	North	H.P	AVRESTPC	P	UC	Less than 100	2	100	ROR	100	2009-10			100			Ready	OCT, 04	JAN, 05	MAR, 05	OCT, 05	DONGFANG, HONG KONG
39	Karcham Wangtoo	North	H.P.	JPKHCL	P	UC	200 and above	4	1000	ROR	1000	2011-12					1000	Ready	MAR, 03	MAR, 03	JULY, 03	OCT, 07	VOITH SIEMENS
40	Sorang	North	H.P.	SOPRANDPC	P	UC	Less than 100	2	100	ROR	100	2011-12					100	Ready	JUNE, 06	DONE	JUNE, 07	JUNE, 07	VOITH SIEMENS

Sl. No.	Plant Name	Region	State	Agency	Sector	Category	Unit size group	No. of units in 11th Plan	Ultimate capacity (MW)	Type	Benefits 11th Plan (2007-12)	Likely year of benefit	2007-08	2008-09	2009-10	2010-11	2011-12	DPR Status	Concurrence of CEA/State Govt.	CCEA/ Financial Closure	LOA Date/ Civil Contract	E&M Equipment Order	Agency Remarks
41	Srinagar	North	UKND	GVK	P	UC	Less than 100	4	330	ROR	330	2011-12					330	Ready	JULY, 04	DEC, 06	JUNE, 07	APR, 07	BHEL
42	Maheshwar	West	MP	SMHPCL	P	UC	Less than 100	10	400	STO	400	2011-12					400	Ready	JUNE, 96	DEC, 96	FEB, 97	JUNE, 07	BHEL
43	Teesta III	East	SIKKIM	TEESTA URJA	P	UC	200 and above	6	1200	ROR	1200	2011-12					1200	Ready	DONE	DONE	APR, 07	2007-08	VA TECH
44	Chujachen	East	SIKKIM	GATI	P	UC	Less than 100	2	99	ROR	99	2009-10			99			Ready	DONE	DONE	AUG, 06	DEC, 06	ALLTOM
	Total (Commissioned + Under Construction)				159						15507		2423	1097	1805	1741	8441						
Summary		Projects Commissioned & Under Construction				15507					0		2423	1097	1805	1741	8441						
		Projects where LOA yet to be placed									0		0	0	0	0	0						
		Total Hydro									15507		2423	1097	1805	1741	8441						
E. Project ts included earlier in 78,700 MW programme but not feasible now																							
1.	Lower Jurala	South	AP	APGENCO	S	UC	Less than 100	3	240	STO	120												
	Total Unfeasable									120													

C: Central Sector; S: State Sector; P: Private Sector; UC Under Construction; COMM: LOA to be placed;

ROR Run of River; STO: Storage; PSS: Pumped Storage